

Morbidity and Mortality

Weekly
Report

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

Prepared by the

COMMUNICABLE DISEASE CENTER

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PROVISIONAL INFORMATION ON SELECTED NOTIFIABLE DISEASES IN THE UNITED STATES AND ON
DEATHS IN SELECTED CITIES FOR WEEK ENDED APRIL 11, 1964

MENINGOCOCCAL MENINGITIS

A total of 98 cases of meningococcal meningitis was reported for the week ended April 11. Of this total, 37 were reported from 3 States; California reported 17, Kentucky 12, and Missouri 8.

The 17 cases reported from California were from 8 separate counties stretching the entire length of the State.

Kentucky's 12 new cases raises its 1964 cumulative total to 31. Eight of the 12 cases this past week were reported from Fort Knox; 3 of the 8 cases were fatal. The remaining 4 cases, believed unrelated, were from scattered areas of the State. A sulfa prophylaxis program was held at Fort Knox.

Five of Missouri's 8 cases occurred in Ft. Leonard Wood personnel; 2 of the 5 were fatal. The remainder of

cases were from scattered areas of the State. Of Missouri's 26 cases this year, 12 were reported from Ft. Leonard Wood.

The 98 cases raise the cumulative total to 901 for the first 15 weeks. The 98 cases reported for the past week are about double the 5 year median (1959-1963), but the 1964 total to date is only 3 more than the total for the comparable period of 1963. The 1964 cumulative total is about 6 percent above the 5 year median.

Although the overall total is about the same as last year, many States in the South and Southeast as well as New Mexico and California have shown notable increases in cumulative 1964 total cases.

Table 1. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

Disease	15th Week Ended		Median 1959 - 1963	Cumulative, First 15 Weeks		
	April 11, 1964	April 13, 1963		1964	1963	Median 1959 - 1963
Aseptic meningitis	41	22	---	410	333	---
Brucellosis	6	6	10	106	93	158
Diphtheria	3	8	8	55	99	222
Encephalitis, primary infectious ..	31	39	---	476	384	---
Encephalitis, post-infectious	24		---	194		---
Hepatitis, infectious including serum hepatitis	771	792	836	13,736	15,489	15,489
Measles	26,935	17,542	17,542	167,274	178,245	183,291
Meningococcal infections	98	54	51	901	898	852
Poliomyelitis, Total	-	3	11	19	43	123
Paralytic	-	3	9	13	38	78
Nonparalytic	-	-	---	5	2	---
Unspecified	-	-	---	1	3	---
Streptococcal Sore Throat and Scarlet fever	11,322	7,405	---	162,480	146,975	---
Tetanus	4	4	---	55	50	---
Tularemia	3	4	---	76	58	---
Typhoid fever	6	13	11	95	106	139
Rabies in Animals	109	100	100	1,250	1,056	1,208

Table 2. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Psittacosis: Ga.-1	13
Botulism:	6	Rabies in Man:	-
Leptospirosis:	6	Smallpox:	-
Malaria:	6	Typhus-	
Plague:	27	Murine:	2
	-	Rky Mt. Spotted: Tenn.-1, Okla.-1	6

Figures For Current Week Exclude Missing Report From Alaska.

EPIDEMIOLOGICAL REPORT
JIMSON WEED POISONING - TENNESSEE

An unusual outbreak of stramonium food poisoning related to jimson weed consumption was reported from Hawkins County, Tennessee. Five persons in all became ill between 5 minutes and 5 hours after consuming tomatoes which contained the alkaloid.

Five minutes after eating, 2 adults became acutely ill at the luncheon table with visual hallucinations, disorientation, generalized weakness, blurred vision, pronounced thirst, vertigo and nausea. They were hospitalized immediately. On physical examination, both had dilated, sluggishly reactive pupils. Within 5 hours of this meal, the 3 others sharing it had become ill with similar, but milder, symptoms.

The meal had consisted of fresh, sliced tomatoes, split pea soup, spaghetti, sweet milk, and cornbread. Both the split pea soup and spaghetti had been served 2 days earlier; they had been reheated for this meal.

One individual had consumed 3-1/2 slices of tomato and 4 others had eaten 1 slice each of fresh tomato. Commercially canned tomatoes were used in the spaghetti.

In a telephone call from the hospital to Dr. Cecil B. Tucker, Director, Division of Preventable Diseases, Tennessee State Health Department, it was noted that the tomatoes served at the meal had been "grown with jimson weed." Immediate examination of the State Toxicology files yielded a description of jimson weed poisoning, the toxic principal being the alkaloids stramonium, hyoscyamine, scopolamine, and atropine. Certain that jimson weed explained their symptoms, Dr. Tucker immediately telephoned this information to their physicians.

A description of each of the cases follows:

Case 1: Five minutes after eating 3-1/2 slices of tomatoes, a 48-year-old male developed blurred vision and experienced vertigo when he attempted to stand. Within the next hour, he experienced visual hallucinations (bugs and flowers). He attempted to pick objects out of the air and twist imaginary door knobs. He complained of extreme thirst, xerostomia, muscle spasms in the lower extremities, and mild cramping abdominal pain. When he presented to the emergency room, he was irritable, continued to hallucinate, and was incontinent of urine. His temperature was 99°F., blood pressure 120/80, pulse 100, and respirations 20. His face was moderately flushed and the oral mucous membranes were dry. Both pupils were widely dilated and reacted sluggishly to light. The remainder of the general physical and neurological examinations was unremarkable except for slight twitching of the lower extremities. Routine urinalysis and blood counts were normal.

The patient was started on oral pilocarpine after stramonium was implicated as the etiological agent, receiving a total of 30 mgm. during the night of admission. Rapid improvement followed with return of a clear sensorium. The patient was asymptomatic at the time of his discharge on October 30.

Case 2: Within five minutes after eating one tomato slice, a 30-year-old female cried out, "I'm going blind!" She became drowsy and laid her head on the table for a few moments. When she attempted to stand, her vision again became blurred and she experienced marked vertigo. Mild nausea, abdominal cramping pain, and vomiting followed within the hour. She complained of extreme thirst and xerostomia, unrelieved by repeated gulps of water. On arrival at the hospital, she was disoriented and was having visual hallucinations. She was unable to walk or sit without support. Her temperature was 99°F., blood pressure 130/80, pulse 88, and respirations 22. Both pupils were dilated and reacted sluggishly to light. She continued to complain of blurred vision. The oral mucous membranes were dry. There was moderate tenderness to abdominal palpation. The remainder of the examination was normal. A sedimentation rate of 42 mm. per hour was the only abnormal laboratory value. She received the same treatment as Case 1 and was discharged from the hospital 2 days after admission.

Case 3: A 42-year-old female ate one tomato slice, felt somewhat "goofy" approximately one hour after the noon meal, and later experienced slight vertigo, xerostomia, generalized weakness, and loss of appetite. When examined that evening, she was found to have dilated, reactive pupils. Because of the mildness of her symptoms, she was not hospitalized but given 10 mgm. of pilocarpine orally at the emergency room. By the following day, she was entirely asymptomatic.

Case 4: A 31-year-old male experienced only mild nausea, diarrhea, and cramping abdominal pain approximately 5 hours following the noon meal. He ate one tomato slice. He was not hospitalized and received no medications.

Case 5: A 3-year-old boy ate one tomato slice and remained asymptomatic until approximately 5 hours following the noon meal when he developed blurred vision, vertigo, loss of appetite, and visual hallucinations (crawling bugs). Later that evening, he was observed to have dilated, reactive pupils. During the following day, he complained of abdominal pain with vomiting and diarrhea. He was asymptomatic on the following evening. He was not hospitalized and received no medications.

The tomato consumed at the meal was obtained from a tomato plant grafted to the root of a jimson weed (*Datura stramonium*). This had been done in an attempt to produce a larger tomato, more resistant to cold.

Case Number 1 had become familiar with this grafting procedure through a neighbor (not a victim). This neighbor had attempted tomato grafting with several plants for 5 years, but had been successful only with the jimson weed. He had only occasionally tasted tomatoes from these plants. He never experienced ill effects.

The tomato consumed at the above meal was the first to be eaten from Case Number 1's plants. Following this incident, it was learned that Case Number 1's grafts were made with an above-ground secondary branch of the jimson weed, whereas the neighbor had always grafted the stalks to the roots below ground.

Tennessee health authorities conclude that this modification in technique may have accounted for the toxicity of Case Number 1's tomatoes.

One whole tomato was retrieved from Case Number 1's home and forwarded to the Tennessee Industrial Hygiene Laboratory. This was produced by the same grafting technique but did not come from the same plant that yielded the tomato consumed at the above meal. Three tomatoes were also obtained from the neighbor's home (grown by grafts made to the root stalks).

Case Number 1's tomato yielded 4.2 milligrams of stramonium alkaloids per 100 grams of tomato; the neighbor's tomatoes yielded 1.9 milligrams per 100 grams.

The tested tomato would contain about 1.0 milligrams of total alkaloid per slice, according to calculations from the laboratory results; since the ingested tomato was not analyzed, direct comparison of dosage and symptomatology is not possible.

(Reported by W. L. Clark, M.D., Church Hill, Tenn.; R. H. Jernigan, M.D., Kingsport, Tenn.; J. W. Erwin, M.D., Director, Sullivan County Health Department; Margaret Davidson, R.N., Public Health Nurse, Hawkins County; and Cecil B. Tucker, M.D., Director, Division of Preventable Diseases, Tennessee State Health Department.)

Editor's Note: Numerous case reports of jimson weed poisoning have appeared in the medical literature; yet there is no available report of the stramonium alkaloids being transferred to a second plant grafted to the host jimson weed.

The jimson weed (*Datura stramonium*), also known as thorn apple, Jamestown weed, stink weed, devil's apple, and apple of Peru, is a species of the Solanacea family to which the red pepper, tobacco, tomato, and belladonna plants belong. The plant is prevalent in this country and in all temperate and tropical zones, flowering in late spring and with the fruit ripening in early fall. All parts of the plant are poisonous, especially the seeds. It is a rank-scented, tall, branched plant which attains a height of three to six feet with trumpet-shaped flowers and spinous capsule which contains numerous black-brown seeds.¹

The plant grows wild around barn yards, manure piles, and road slides, and is readily available to the sampling of inquisitive children. Mitchell² reported that between 1950 and 1955, jimson weed intoxication accounted for 4 percent of pediatric patients admitted to the University of Virginia hospital because of the accidental ingestion of toxic substances. In this hospital this was approximately the same frequency as intoxications due to lead, alcohol, barbituates, and insecticides. Most cases result from the plant's use in Jimson weed tea, reported to be an effective treatment for asthma and other respiratory ailments.

REFERENCES

1. Jennings, R.E.: Stramonium poisoning: review of the literature and report of two cases. *J. Pediat.* 6: 657, 1935.
2. Mitchell, Joe E., and F.N. Mitchell: Jimson weed (*Datura stramonium*) poisoning in children. *J. Pediat.* 47:227, 1955.
3. Goodman, L.S., and Alfred Gilman: The pharmacological basis of therapeutics, The Macmillan Company, second edition, New York, 1958, pages 552-553.

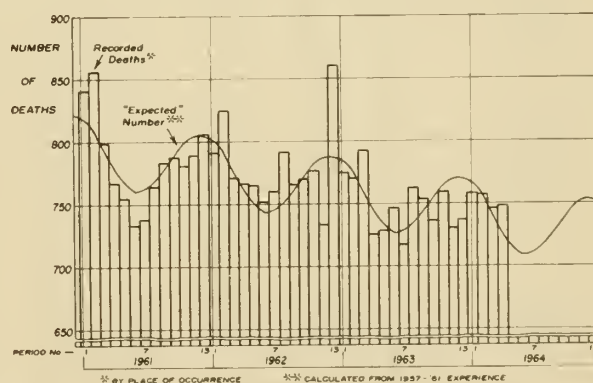
INFANT DEATHS IN 108 CITIES

The weekly average number of infant deaths in 108 cities for the four-week period ending April 11 was 748 as compared with an expected 726 weekly average.

Total Deaths Under One Year of Age Recorded in 108 Cities

	Week Ending				4 Week Total	Weekly Average
	3/21	3/28	4/4	4/11		
Observed	786	706	739	761	2,992	748
Expected	731	728	725	722	2,906	726
Excess	55	-22	14	39	86	22

DEATHS UNDER ONE YEAR OF AGE IN 108 U.S. CITIES
Average Number per Week by Four-Week Periods



(See Table, page 131)

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Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
APRIL 11, 1964 AND APRIL 13, 1963 (15th WEEK)

Area	Aseptic Meningitis		Encephalitis		Poliomyelitis, Total Cases				Poliomyelitis, Paralytic			
			Primary	Post-Inf.								
	1964	1963			1964	1963	Cumulative		1964	1963	Cumulative	
							1964	1963			1964	1963
UNITED STATES...	41	22	31	24	-	3	19	43	-	3	13	38
NEW ENGLAND.....	-	1	2	-	-	-	-	-	-	3	13	-
Maine.....	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire.....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts.....	-	1	1	-	-	-	-	-	-	-	-	-
Rhode Island.....	-	-	1	-	-	-	-	-	-	-	-	-
Connecticut.....	-	-	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	3	2	4	4	-	-	4	5	-	-	4	5
New York City.....	1	-	-	-	-	-	1	-	-	-	1	-
New York, Up-State.....	-	2	1	1	-	-	2	4	-	-	2	4
New Jersey.....	2	-	2	-	-	-	1	-	-	-	1	-
Pennsylvania.....	-	-	1	3	-	-	-	1	-	-	-	1
EAST NORTH CENTRAL...	4	-	10	10	-	2	1	12	-	2	1	10
Ohio.....	-	-	3	4	-	1	-	4	-	1	-	3
Indiana.....	-	-	2	-	-	-	-	-	-	-	-	-
Illinois.....	3	-	4	5	-	1	1	6	-	1	1	5
Michigan.....	1	-	1	1	-	-	-	2	-	-	-	2
Wisconsin.....	-	-	-	-	-	-	-	-	-	-	-	-
WEST NORTH CENTRAL...	2	1	4	-	-	-	-	1	-	-	-	1
Minnesota.....	2	1	2	-	-	-	-	1	-	-	-	1
Iowa.....	-	-	-	-	-	-	-	-	-	-	-	-
Missouri.....	-	-	1	-	-	-	-	-	-	-	-	-
North Dakota.....	-	-	1	-	-	-	-	-	-	-	-	-
South Dakota.....	-	-	-	-	-	-	-	-	-	-	-	-
Nebraska.....	-	-	-	-	-	-	-	-	-	-	-	-
Kansas.....	-	-	-	-	-	-	-	-	-	-	-	-
SOUTH ATLANTIC.....	2	-	6	1	-	-	9	3	-	-	6	2
Delaware.....	-	-	2	-	-	-	-	-	-	-	-	-
Maryland.....	-	-	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	-	-	-
Virginia.....	-	-	-	1	-	-	-	-	-	-	-	-
West Virginia.....	-	-	-	-	-	-	-	-	-	-	-	-
North Carolina.....	-	-	3	-	-	-	4	2	-	-	1	2
South Carolina.....	-	-	-	-	-	-	1	-	-	-	1	-
Georgia.....	-	-	-	-	-	-	1	1	-	-	1	-
Florida.....	2	-	1	-	-	-	3	-	-	-	3	-
EAST SOUTH CENTRAL...	7	3	1	-	-	1	1	3	-	1	-	2
Kentucky.....	7	-	-	-	-	-	-	-	-	-	-	-
Tennessee.....	-	-	-	-	-	1	1	1	-	1	-	1
Alabama.....	-	-	-	-	-	-	-	2	-	-	-	1
Mississippi.....	-	3	1	-	-	-	-	-	-	-	-	-
WEST SOUTH CENTRAL...	6	3	2	-	-	-	2	9	-	-	1	9
Arkansas.....	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana.....	-	-	-	-	-	-	-	8	-	-	-	8
Oklahoma.....	-	1	-	-	-	-	-	-	-	-	-	-
Texas.....	6	2	2	-	-	-	2	1	-	-	1	1
MOUNTAIN.....	1	3	-	1	-	-	2	1	-	-	1	1
Montana.....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	1	-	-	-	1
Wyoming.....	-	-	-	-	-	-	-	-	-	-	-	-
Colorado.....	1	3	-	-	-	-	1	-	-	-	1	-
New Mexico.....	-	-	-	-	-	-	1	-	-	-	-	-
Arizona.....	-	-	-	-	-	-	-	-	-	-	-	-
Utah.....	-	-	-	1	-	-	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	16	9	2	8	-	-	-	9	-	-	-	8
Washington.....	3	-	-	-	-	-	-	1	-	-	-	1
Oregon.....	-	-	-	-	-	-	-	1	-	-	-	1
California.....	9	9	2	8	-	-	-	7	-	-	-	6
Alaska.....	---	-	---	---	---	-	-	-	---	-	-	-
Hawaii.....	4	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	-	-	-	-	-	2	-	-	-	2

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Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

APRIL 11, 1964

AND

APRIL 13, 1963 (

15th WEEK) - Continued

Area	Brucellosis		Diphtheria		Infectious Hepatitis including Serum Hepatitis						Typhoid Fever	
	1964	Cum.	1964	Cum.	Total	Under 20 years	20 years and over	Age Unknown	Cumulative		1964	Cum.
		1964		1964	1964	1964	1964	1964	1964	1964		1963
UNITED STATES...	6	106	3	55	771	357	348	66	13,736	15,489	6	95
NEW ENGLAND.....	-	1	1	4	43	17	24	2	1,489	1,884	-	7
Maine.....	-	-	-	1	15	5	10	-	526	873	-	-
New Hampshire.....	-	-	-	-	-	-	-	-	121	126	-	-
Vermont.....	-	-	-	-	8	5	2	1	183	27	-	-
Massachusetts.....	-	1	1	3	6	2	4	-	290	561	-	4
Rhode Island.....	-	-	-	-	5	1	4	-	68	48	-	3
Connecticut.....	-	-	-	-	9	4	4	1	301	249	-	-
MIDDLE ATLANTIC.....	-	2	-	4	196	86	110	-	3,092	3,012	1	17
New York City.....	-	-	-	1	44	15	29	-	439	362	-	5
New York, Up-State.....	-	1	-	-	69	35	34	-	1,384	1,368	1	4
New Jersey.....	-	-	-	2	42	17	25	-	560	467	-	-
Pennsylvania.....	-	1	-	1	41	19	22	-	709	815	-	8
EAST NORTH CENTRAL...	1	15	-	6	122	64	42	16	2,052	2,431	2	21
Ohio.....	-	-	-	-	27	11	10	6	546	734	-	14
Indiana.....	-	1	-	-	15	4	11	-	169	219	1	3
Illinois.....	-	10	-	6	17	4	6	7	322	508	-	3
Michigan.....	1	2	-	-	55	43	12	-	893	839	1	1
Wisconsin.....	-	2	-	-	8	2	3	3	122	131	-	-
WEST NORTH CENTRAL...	2	55	1	9	40	21	14	5	816	677	-	9
Minnesota.....	-	2	1	2	9	4	4	1	65	114	-	-
Iowa.....	1	27	-	-	6	3	2	1	119	117	-	3
Missouri.....	-	4	-	-	6	1	5	-	200	285	-	2
North Dakota.....	-	1	-	-	-	-	-	-	35	16	-	-
South Dakota.....	1	10	-	-	5	2	3	-	86	15	-	1
Nebraska.....	-	10	-	-	-	-	-	-	18	54	-	-
Kansas.....	-	1	-	7	14	11	-	3	293	76	-	3
SOUTH ATLANTIC.....	-	6	-	11	83	41	36	6	1,354	1,659	2	20
Delaware.....	-	-	-	-	1	-	1	-	30	25	-	-
Maryland.....	-	-	-	-	20	10	10	-	260	187	-	-
Dist. of Columbia..	-	-	-	-	-	-	-	-	26	57	-	-
Virginia.....	-	2	-	-	17	4	8	5	205	362	-	4
West Virginia.....	-	-	-	-	10	8	1	1	237	243	-	-
North Carolina.....	-	1	-	-	16	11	5	-	249	452	-	9
South Carolina.....	-	-	-	3	2	1	1	-	42	69	1	2
Georgia.....	-	2	-	6	2	1	1	-	31	61	-	-
Florida.....	-	1	-	2	15	6	9	-	274	203	1	5
EAST SOUTH CENTRAL...	1	5	-	4	54	31	17	6	966	1,600	-	10
Kentucky.....	1	1	-	-	22	13	4	5	428	480	-	5
Tennessee.....	-	-	-	1	21	11	9	1	330	619	-	4
Alabama.....	-	3	-	2	8	5	3	-	133	243	-	1
Mississippi.....	-	1	-	1	3	2	1	-	75	258	-	-
WEST SOUTH CENTRAL...	1	5	-	10	74	44	28	2	992	1,043	-	6
Arkansas.....	-	1	-	-	6	6	-	-	115	127	-	3
Louisiana.....	-	1	-	2	21	12	9	-	203	190	-	-
Oklahoma.....	-	1	-	-	6	4	1	1	62	59	-	3
Texas.....	1	2	-	8	41	22	18	1	612	667	-	-
MOUNTAIN.....	1	11	-	1	55	18	9	28	920	1,087	-	-
Montana.....	-	-	-	-	8	4	4	-	85	169	-	-
Idaho.....	-	-	-	-	2	-	-	2	68	160	-	-
Wyoming.....	-	-	-	-	-	-	-	-	32	17	-	-
Colorado.....	-	-	-	-	26	10	2	14	282	233	-	-
New Mexico.....	-	1	-	1	5	2	1	2	146	133	-	-
Arizona.....	-	1	-	-	8	-	-	8	197	244	-	-
Utah.....	1	8	-	-	4	2	2	-	82	122	-	-
Nevada.....	-	1	-	-	2	-	-	2	28	9	-	-
PACIFIC.....	-	6	1	6	104	35	68	1	2,055	2,096	1	5
Washington.....	-	-	1	6	10	5	5	-	212	346	1	1
Oregon.....	-	1	-	-	13	2	10	1	215	312	-	-
California.....	-	5	-	-	79	26	53	-	1,520	1,380	-	4
Alaska.....	---	-	---	-	---	---	---	---	61	46	---	-
Hawaii.....	-	-	-	-	2	2	-	-	47	12	-	-
Puerto Rico	-	-	-	3	20	14	6	-	193	199	-	5

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED

APRIL 13, 1964 AND APRIL 11, 1963 (---- 15th WEEK) - Continued

Area	Measles	Meningococcal Meningitis			Streptococcal Sore Throat and Scarlet Fever		Tetanus		Tularemia		Rabies in Animals	
		1964	Cumulative		1964	1963	1964	Cum. 1964	1964	Cum. 1964	1964	Cum. 1964
			1964	1963								
UNITED STATES...	26,935	98	901	898	11,322	7,405	4	55	3	76	109	1,250
NEW ENGLAND.....	658	-	26	62	1,425	909	-	-	-	-	1	4
Maine.....	100	-	2	10	47	71	-	-	-	-	1	2
New Hampshire.....	5	-	-	2	3	14	-	-	-	-	-	1
Vermont.....	124	-	1	2	26	-	-	-	-	-	-	1
Massachusetts.....	190	-	13	28	250	169	-	-	-	-	-	-
Rhode Island.....	108	-	2	6	135	73	-	-	-	-	-	-
Connecticut.....	131	-	8	14	964	585	-	-	-	-	-	-
MIDDLE ATLANTIC.....	2,567	14	90	111	533	557	-	1	-	-	3	25
New York City.....	765	5	17	13	41	52	-	-	-	-	-	-
New York, Up-State.....	558	4	33	37	353	297	-	-	-	-	3	24
New Jersey.....	646	-	14	19	80	106	-	-	-	-	-	-
Pennsylvania.....	598	5	26	42	59	102	-	1	-	-	-	1
EAST NORTH CENTRAL...	4,167	7	143	147	1,459	1,132	-	5	-	8	15	130
Ohio.....	1,293	3	45	43	299	160	-	1	-	1	9	68
Indiana.....	420	1	25	17	62	147	-	1	-	-	1	8
Illinois.....	891	1	29	24	215	195	-	2	-	5	5	24
Michigan.....	794	1	32	44	576	410	-	1	-	1	-	12
Wisconsin.....	769	1	12	19	307	220	-	-	-	1	-	18
WEST NORTH CENTRAL...	1694	10	50	55	506	209	1	3	-	21	44	402
Minnesota.....	18	2	10	10	34	13	-	-	-	1	16	120
Iowa.....	1405	-	2	2	140	55	1	1	-	1	13	139
Missouri.....	16	8	26	24	56	13	-	2	-	13	5	76
North Dakota.....	195	-	3	1	150	100	-	-	-	-	3	20
South Dakota.....	-	-	-	3	44	10	-	-	-	-	7	34
Nebraska.....	60	-	4	13	-	-	-	-	-	-	-	8
Kansas.....	NN	-	5	2	82	18	-	-	-	6	-	5
SOUTH ATLANTIC.....	2380	17	197	184	1347	315	2	22	-	13	6	196
Delaware.....	17	-	2	1	15	6	-	-	-	-	-	-
Maryland.....	214	1	15	26	219	38	-	1	-	-	-	-
Dist. of Columbia..	20	2	7	3	14	4	-	-	-	-	-	-
Virginia.....	566	2	18	47	186	134	1	2	-	3	3	140
West Virginia.....	635	2	16	9	412	-	-	-	-	-	-	8
North Carolina.....	61	2	33	29	26	31	-	7	-	3	-	2
South Carolina.....	360	6	29	12	79	19	-	3	-	-	-	-
Georgia.....	-	2	17	11	6	1	-	1	-	7	2	21
Florida.....	507	-	60	46	390	82	1	8	-	-	1	25
EAST SOUTH CENTRAL...	5197	19	95	76	2018	962	1	8	-	16	8	191
Kentucky.....	1908	12	31	19	181	49	1	1	-	1	-	25
Tennessee.....	1494	4	34	33	1616	860	-	3	-	11	8	160
Alabama.....	35	1	17	11	4	25	-	3	-	3	-	6
Mississippi.....	1760	2	13	13	217	28	-	1	-	1	-	-
WEST SOUTH CENTRAL...	5933	8	77	103	983	698	-	8	3	14	18	203
Arkansas.....	226	1	7	5	9	8	-	2	2	3	3	46
Louisiana.....	3	5	65	46	-	-	-	3	-	-	-	20
Oklahoma.....	53	-	3	18	74	16	-	-	-	10	2	22
Texas.....	5651	2	2	34	900	674	-	3	1	1	13	115
MOUNTAIN.....	879	2	36	32	1742	1334	-	2	-	4	5	50
Montana.....	124	-	-	1	89	50	-	-	-	1	-	-
Idaho.....	117	-	1	1	171	179	-	-	-	-	-	-
Wyoming.....	-	-	1	1	20	65	-	1	-	1	-	-
Colorado.....	151	-	7	7	699	545	-	-	-	-	-	-
New Mexico.....	10	2	18	2	386	237	-	1	-	-	1	25
Arizona.....	380	-	2	6	157	123	-	-	-	-	4	25
Utah.....	96	-	1	11	220	129	-	-	-	2	-	-
Nevada.....	1	-	6	3	-	6	-	-	-	-	-	-
PACIFIC.....	3460	21	187	128	1309	1289	-	6	-	-	9	49
Washington.....	798	1	16	11	336	497	-	-	-	-	-	-
Oregon.....	318	2	11	6	41	38	-	-	-	-	-	-
California.....	2340	17	150	105	899	696	-	6	-	-	9	49
Alaska.....	---	---	5	4	---	41	---	-	---	-	---	-
Hawaii.....	4	1	5	2	33	17	-	-	-	-	-	-
Puerto Rico	238	1	9	-	4	1	-	19	-	-	1	6

Table 4 (C). TOTAL DEATHS UNDER 1 YEAR OF AGE IN REPORTING CITIES

(Tables 4(A), 4(B), 4(C), and 4(D) will be published in sequence covering a four-week period.)^o

Area	For weeks ending				Area	For weeks ending			
	3/21	3/28	4/4	4/11		3/21	3/28	4/4	4/11
NEW ENGLAND:					SOUTH ATLANTIC:				
Boston, Mass.....	19	16	18	18	Atlanta, Ga.....	8	7	16	9
Bridgeport, Conn.....	2	3	2	-	Baltimore, Md.....	10	18	23	18
Cambridge, Mass.....	2	-	-	-	Charlotte, N.C.....	-	1	2	9
Fall River, Mass.....	3	-	-	4	Jacksonville, Fla.....	11	4	8	6
Hartford, Conn.....	4	1	8	6	Miami, Fla.....	5	6	7	5
Lowell, Mass.....	1	-	1	3	Norfolk, Va.....	1	5	3	5
Lynn, Mass.....	-	1	1	-	Richmond, Va.....	9	7	5	6
New Bedford, Mass.....	-	-	1	2	Savannah, Ga.....	4	1	2	2
New Haven, Conn.....	6	2	3	6	St. Petersburg, Fla.....	4	3	1	1
Providence, R.I.....	7	7	4	3	Tampa, Fla.....	6	6	3	3
Somerville, Mass.....	2	1	-	-	Washington, D.C.....	33	8	7	33
Springfield, Mass.....	4	1	5	-	Wilmington, Del.....	5	1	3	3
Waterbury, Conn.....	-	-	1	-					
Worcester, Mass.....	1	-	2	4	EAST SOUTH CENTRAL:				
MIDDLE ATLANTIC:					Birmingham, Ala.....	8	4	14	5
Albany, N.Y.....	3	2	4	3	Chattanooga, Tenn.....	6	1	7	5
Allentown, Pa.....	1	2	3	4	Knoxville, Tenn.....	2	5	1	2
Buffalo, N.Y.....	4	9	10	8	Louisville, Ky.....	10	15	7	9
Camden, N.J.....	4	3	4	4	Memphis, Tenn.....	14	10	11	8
Elizabeth, N.J.....	1	1	1	-	Mobile, Ala.....	2	4	4	6
Erie, Pa.....	2	1	1	3	Montgomery, Ala.....	1	6	2	6
Jersey City, N.J.....	6	2	5	4	Nashville, Tenn.....	8	5	8	2
Newark, N.J.....	5	23	7	3	WEST SOUTH CENTRAL:				
New York City, N.Y.....	95	90	77	104	Austin, Tex.....	4	2	2	2
Paterson, N.J.....	3	4	3	3	Baton Rouge, La.....	2	1	2	-
Philadelphia, Pa.....	28	16	28	44	Corpus Christi, Tex.....	3	2	2	1
Pittsburgh, Pa.....	15	7	11	5	Dallas, Tex.....	12	11	13	16
Reading, Pa.....	4	2	2	1	El Paso, Tex.....	9	4	11	6
Rochester, N.Y.....	5	8	2	1	Fort Worth, Tex.....	7	3	2	4
Schenectady, N.Y.....	-	4	5	3	Houston, Tex.....	9	14	29	15
Scranton, Pa.....	3	3	-	1	Little Rock, Ark.....	3	9	9	3
Syracuse, N.Y.....	3	4	6	4	New Orleans, La.....	16	17	9	16
Trenton, N.J.....	4	2	7	2	Oklahoma City, Okla.....	4	3	10	1
Utica, N.Y.....	1	-	-	1	San Antonio, Tex.....	13	4	12	8
Yonkers, N.Y.....	2	-	3	3	Shreveport, La.....	8	5	2	2
EAST NORTH CENTRAL:					Tulsa, Okla.....	1	1	3	4
Akron, Ohio.....	2	1	3	2	MOUNTAIN:				
Canton, Ohio.....	2	2	2	-	Albuquerque, N. Mex.....	2	1	-	2
Chicago, Ill.....	51	37	47	45	Colorado Springs, Colo...	2	4	1	2
Cincinnati, Ohio.....	12	12	4	13	Denver, Colo.....	9	5	11	6
Cleveland, Ohio.....	14	16	14	6	Ogden, Utah.....	1	1	-	-
Columbus, Ohio.....	14	10	15	6	Phoenix, Ariz.....	11	5	2	6
Dayton, Ohio.....	1	8	7	4	Pueblo, Colo.....	2	-	1	1
Detroit, Mich.....	26	20	23	25	Salt Lake City, Utah.....	5	7	4	2
Evansville, Ind.....	4	3	2	2	Tucson, Ariz.....	2	2	1	3
Flint, Mich.....	2	5	3	3	PACIFIC:				
Fort Wayne, Ind.....	6	-	1	-	Berkeley, Calif.....	2	-	1	-
Gary, Ind.....	2	4	8	3	Fresno, Calif.....	4	1	3	6
Grand Rapids, Mich.....	4	2	5	3	Glendale, Calif.....	2	2	-	2
Indianapolis, Ind.....	8	11	12	8	Honolulu, Hawaii.....	9	2	11	4
Madison, Wis.....	2	3	6	2	Long Beach, Calif.....	4	6	3	1
Milwaukee, Wis.....	7	10	4	13	Los Angeles, Calif.....	34	35	31	32
Peoria, Ill.....	1	-	3	8	Oakland, Calif.....	5	10	6	4
Rockford, Ill.....	1	1	-	2	Pasadena, Calif.....	1	-	-	-
South Bend, Ind.....	1	6	3	-	Portland, Oreg.....	3	4	6	8
Toledo, Ohio.....	5	5	6	2	Sacramento, Calif.....	3	9	1	4*
Youngstown, Ohio.....	4	4	-	5	San Diego, Calif.....	11	6	7	6
WEST NORTH CENTRAL:					San Francisco, Calif.....	3	11	7	15
Des Moines, Iowa.....	5	2	4	7	San Jose, Calif.....	1	1	1	3
Duluth, Minn.....	1	-	1	2	Seattle, Wash.....	1	7	10	6
Kansas City, Kans.....	6	2	5	4	Spokane, Wash.....	1	4	1	-
Kansas City, Mo.....	8	10	5	6	Tacoma, Wash.....	-	4	1	2
Lincoln, Nebr.....	-	1	2	3					
Minneapolis, Minn.....	8	6	7	8	San Juan, P.R.....	3	1	-	---
Omaha, Nebr.....	8	3	4	3					
St. Louis, Mo.....	22	11	6	17					
St. Paul, Minn.....	6	3	7	7					
Wichita, Kans.....	5	3	3	9					

^oCurrent Week Mortality for 108 Selected Cities

4(A) Total Mortality, all ages..... 12,122
 4(B) Pneumonia-Influenza Deaths, all ages..... 537
 4(C) Total Deaths under 1 Year of Age..... 761
 4(D) Total Deaths, Persons 65 years and over..... 6,822

*Estimate - based on average percent of divisional total.
 Totals for previous weeks include reported corrections.

NOTE: All deaths by place of occurrence.



INTERNATIONAL NOTES

POLIOMYELITIS - Chile

During the first week of February an outbreak of poliomyelitis began in Santiago Province. The outbreak reached its peak with a weekly total of 28 cases in the third week of that month and then declined. As of March 2 a total of 71 confirmed cases had been reported.

The decrease was attributed to the rapid mass vaccination carried out by the National Health Service throughout Santiago Province, which immunized 164,731 children in the age range 3 months to 3 years. A breakdown by age of the cases shows that 25 percent were under 1 year of age, 29 percent between 1 and 2 years and 22 percent between 2 and 3 years. The great majority of cases thus occurred in children under 3 years. The age distribution is similar to that observed in the epidemic of 1961. Of the cases 80 percent were unvaccinated, 10 percent were inadequately immunized and 10 percent had received the prescribed 2 doses of trivalent vaccine. Most of those in the last-mentioned group had completed their vaccination more than one year before the outbreak. Type I poliovirus was isolated from many patients. No type II or type III virus was isolated. From the rest of the country only isolated cases have been reported. (Reported in *Weekly Epidemiological Report, Pan American Sanitary Bureau, WHO, April 1, 1964.*)

QUARANTINE MEASURES

Immunization Information for International Travel
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The following information should be added to the list of Yellow Fever Vaccination Centers in Section 6:

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City: Gastonia, North Carolina

Center: Gaston County Health Department
615 N. Highland Street
Tel: 864-4331

Clinic Hours: Tuesday, 2:00 p.m.

Fee: Yes

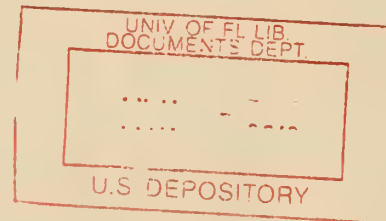
In addition to the established procedures for reporting morbidity and mortality, the Communicable Disease Center welcomes accounts of interesting outbreaks or cases. Such accounts should be addressed to:

Lawrence K. Altman, M.D., Editor
Morbidity and Mortality Weekly Report
Communicable Disease Center
Atlanta, Georgia 30333

Notes: These provisional data are based on weekly telegrams to the Communicable Disease Center by the individual State health departments.

Symbols: --- Data not available
- Quantity zero

Procedures for construction of various mortality curves may be obtained from Statistics Section, Communicable Disease Center, Public Health Service, U. S. Department of Health, Education, and Welfare, Atlanta, Georgia 30333.



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